

Docket No. 245556US2RD/hc



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Yoshiaki SAITO, et al.

SERIAL NO: 10/715,545

GAU: 2818

FILED: November 19, 2003

EXAMINER:

FOR: MAGNETO-RESISTANCE EFFECT ELEMENT, MAGNETIC MEMORY AND MAGNETIC HEAD

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

Marvin J. Spivak

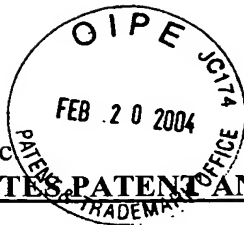
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AND MAGNETIC HEAD

**STATEMENT OF RELEVANCY**

**Reference AA (US 5,940,319) on Form PTO 1449:**

This reference shows the magnetic random access memory with wiring having the magnetic yoke structure. However, there is no description about the structure of free layer. So, there is no relation with the present application.

**Reference AB (US 5,953,248) on Form PTO 1449:**

This reference shows the magnetic tunnel junction with antiferromagnetically coupled tvl-layer structure as a free layer. However, the structure of free layer is different from the present application.

**Reference AC (US 5,966,323) on Form PTO 1449:**

This reference shows the magnetic random access memory with magnetic tunnel junctions with antiferromagnetically coupled tvl-layer structure as a free layer. However, the structure of free layer is different from the present application.

**Reference AD (US 5,966,012) on Form PTO 1449:**

This reference shows the magnetic tunnel junction with antiferromagnetically coupled tvl-layer structure as a free layer. However, the structure of free layer is different from the present application.

**Reference AE (US 5,659,499) on Form PTO 1449:**

This reference shows the magnetic random access memory with wiring having the magnetic yoke structure. However, there is no description about the structure of free layer. So, there is no relation with the present application.

**Reference AF (US 5,956,267) on Form PTO 1449:**

This reference shows the magnetic random access memory with wiring having the magnetic yoke structure. However, there is no description about the structure of free layer. So, there is no relation with the present application.

**Reference AO (JP 9-251621) on Form PTO 1449:**

This reference shows the magnetic tunnel junction with antiferromagnetically coupled tvf-layer structure as a free layer. However, the structure of free layer is different from the present application.

**Reference AP (JP 2001-156358) on Form PTO 1449:**

This reference shows the magnetic tunnel junction with antiferromagnetically coupled tvf-layer structure as a free layer. However, the structure of free layer is different from the present application.

Form PTO 1449  
(Modified)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY DOCKET NO.  
245556US2RDSERIAL NO.  
10/715,545

## LIST OF REFERENCES CITED BY APPLICANT

APPLICANT

Yoshiaki SAITO, et al.

FILING DATE  
November 19, 2003

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	5,940,319	08/17/1999	M. DURLAM, et al.			
	AB	5,953,248	09/14/1999	E. CHEN, et al.			
	AC	5,966,323	10/12/1999	E. CHEN, et al.			
	AD	5,966,012	10/12/1999	S. S. P. PARKIN			
	AE	5,659,499	08/19/1997	E. CHEN, et al.			
	AF	5,956,267	09/21/1999	A. T. HURST, et al.			
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	AO	9-251621	09/22/1997	JAPAN (with English Abstract)		X
	AP	2001-156358	06/08/2001	JAPAN (with English Abstract)		X
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	
	AX	
	AY	
	AZ	

☐ Additional References sheet(s) attached

Examiner

Date Considered

\*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.